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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,457	03/07/2002	Yoshihiro Ishikawa	220416US2	8789

22850 7590 08/02/2004

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EXAMINER	
AMINZAY, SHAIMA Q	

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/091,457	ISHIKAWA, YOSHIHIRO	
	Examiner	Art Unit	
	Shaima Q. Aminzay	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6,7,11-13,16 and 17* is/are rejected.

7)☒ Claim(s) *4-5,8-9,10,14-15,18-19,20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/6-4-02,4/8-21-02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications: Application Filed: 03/07/2002. Foreign Priority Data: 03/07/2001.
2. Independent Claims 1, 11, and dependent claims 2-3, 6-7, 12-13, and 16-17 are pending in the case.
3. Dependent claims 4-5, 8-9, 10, 14-15, 18-19, and 20 are objected
4. The present title of the application is "Power calculation method of a radio communication system and an apparatus thereof".

NON-FINAL ACTION

Claim Rejections - 35 USC § 103

◆ The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

◆ Claims 1-3, 6-7, 11-13, and 16-17 are rejected under 35 U.S.C.103(a) as being unpatentable over Ozluturk U. S. Patent 5842114, in view of Mimura U. S. Patent 6393005.

5. Regarding claims 1, and 11, Ozluturk teaches in a radio communication system (see for example, column 1, lines 8-14) calculating power of a radio wave in a radio channel included in a radio line established between a transmitting station and a receiving station in the system (see for example, column 2, lines 20-32, column 3, lines 50-57, and lines 66-67 continued to column 4, lines 1-9, power calculation of the radio wave in a radio channel once the line is established between a transmission station (Figure 3 (100)) and a receiving station (16 (column 4, lines3-9)), and comprising the step of: calculating the power of the radio wave of the radio channel (see for example, column 3, lines 54-55, calculating the power of the radio wave of the radio channel 114) with using a transmission power of the radio channel and a total transmission power including the transmission power of the radio channel (see for example, column 3, lines 50-55, the total transmission power including the radio channels are calculated).

However, Ozluturk does not teach specifically a code division multiple access radio communication system.

Mimura teaches a code division multiple access radio communication system (see for example, column 1, lines 7-10, and Figure 1, column 6, lines 15-21, the Code Division Multiple Access (CDMA) radio communication system)

It would have been obvious to one of ordinary skill in the art at the time invention was made to combine Mimura's CDMA cellular functions with Ozluturk's "wireless communication system which dynamically adjusts the power

of signals transmitted over global channels from the base station to minimize power spilover to adjacent communication cells" (Ozluturk, column 1, lines 10-14) to provide "method and device for controlling the transmitting power of a base station in a CDMA cellular system that can reduce degradation in forward speech quality in cases in which the total base station transmitting power increases and the base station is unable to transmit the power desired by mobile stations" (Mimura, column 1, lines 10-14).

6. Regarding claims 2, and 12, Ozluturk and Mimura teach claims 1, 11, and further, Ozluturk teaches the transmission power of the radio channel and a ratio of the transmission power of the radio channel to a total transmission power are used for calculating the power of the radio wave of the radio channel (see for example, column 5, lines 31-60, the total transmission power and channel transmission power are used to calculate the power of the radio channel).

7. Regarding claims 3, and 13, Ozluturk and Mimura teach claims 1, 11, and further, Ozluturk teaches the total transmission power and a ratio of the transmission power of the radio channel to the total transmission power are used for calculating the power of the radio wave of the radio channel (see for example, column 5, lines 31-60, the total transmission power (Pt) and a ration of the transmission power (Pg) are used to calculate the power of the radio channel).

8. Regarding claims 6, 7, 16, and 17, Ozluturk and Mimura teach claim 3, and 13, and further, Mimura teaches the power of the radio wave of the radio channel is calculated using a coefficient that estimates an amount of interference

received from the transmitting station with which the receiving station is in communication and other stations (see for example, column 12, lines 54-65, the coefficient estimates an amount of interference received from the transmitting station).

Allowable Subject Matter

9. Claims 4-5, 8-9, 14-15, 18-19, 10, and 20 are objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter.

As to claims 4, and 14 containing the following allowable subject matters that are underlined: "required receiving power R in the radio channel is calculated by a following formula: 3 R = R 0 1 1 - pg P total P herein, R.sub.0 is a required receiving power when interference does not exist at all at a receiver."

As to claims 5, and 15 containing the following allowable subject matters that are underlined: "required receiving power R at a receiver. 4 R = R 0 1 1 - pg 1 herein, R.sub.0 is a required receiving power when interference does not exist at

all at the receiver".

As to claims 8, and 18 containing the following allowable subject matters that are underlined: "the required receiving power R is calculated by one of following formulas: 5 R = R 0 1 1 - pg P total P or R = R 0 1 1 - pg herein, R.sub.0 is a required receiving power when interference does not exist at all at the receiving station".

As to claims 9, and 19 containing the following allowable subject matters that are underlined: "the required receiving power R is calculated according to one of following formulas: 6 R = R 0 1 1 - pg P total P (1 + F) or R = R 0 1 1 - pg 1 + F herein, R.sub.0 is a required receiving power when interference does not exist at all at the receiving station".

As to claims 10, and 20 containing the following allowable subject matters that are underlined: "the required receiving power of the radio channel is calculated according to one of following formulas: 7 R = R 0 1 1 - pg P total P (+ F) or R = R 0 1 1 - pg + F herein, R.sub.0 is a required receiving power when interference does not exist at all at the receiving station".

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 form.

Inquiry

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaima Q. Aminzay whose telephone number is 703-305-8723. The examiner can normally be reached on 7:00 AM -5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shaima Q. Aminzay
(Examiner)

July, 19, 2004

NAY MAUNG
SUPERVISORY PATENT EXAMINER

Nay Maung
(SPE)
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